

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.**

Application Serial Number: 101576906  
Source: IFK0  
Date Processed by STIC: 2/20/07

***ENTERED***



IFWO

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/576,906

DATE: 02/20/2007  
TIME: 14:53:50

Input Set : A:\19781.seq.txt  
Output Set: N:\CRF4\02152007\J576906.raw

(Pg. 6)

3 <110> APPLICANT: BARTHOLOMEUSZ, Angeline; Ingrid  
4 LOCARNINI, Stephen, Alister  
5 AYRES, Anna  
6 YUEN, Lilly, Ka, Wai  
7 SASADEUSZ, Joseph, John  
9 <120> TITLE OF INVENTION: HBV VARIANTS DETECTION AND APPLICATION  
11 <130> FILE REFERENCE: 19781  
13 <140> CURRENT APPLICATION NUMBER: 10/576,906  
14 <141> CURRENT FILING DATE: 2006-04-21  
16 <150> PRIOR APPLICATION NUMBER: AU2003905776  
17 <151> PRIOR FILING DATE: 2003-10-21  
19 <150> PRIOR APPLICATION NUMBER: AU2004900962  
20 <151> PRIOR FILING DATE: 2004-02-25  
22 <160> NUMBER OF SEQ ID NOS: 42  
24 <170> SOFTWARE: PatentIn version 3.2  
26 <210> SEQ ID NO: 1  
27 <211> LENGTH: 1007  
28 <212> TYPE: DNA  
29 <213> ORGANISM: hepatitis B virus  
31 <400> SEQUENCE: 1  
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34 agtcatcctc aggccatgca gtggaactcc agcacattcc accatgctct gctagatccc 120  
36 agacctgctg gtggctccag ttccggaaca gtaaaccctg ttccgactac tgcctctccc 180  
38 atatcgtaa tcttctcgag gactggggac cctgcccga atatggagag caccacatca 240  
40 ggattcctag gaccctcgct cgtgttacag gcggggtttt tcttgttgac aagaatcctc 300  
42 acaataccaa agagtctaga ctcgtggtag acttctctca attttcttagg gggagcaccc 360  
44 acgtgtcctg gccaaaattt gcagtcggccaa acctccaatc actcaccaac ctcttgcct 420  
46 ccaatttgtc ctgggttatcg ctggatgtgt ctgcggcggtt ttatcatctt cctcttcata 480  
48 ctgtgtctat gcctcatctt cttgttgggtt cttctggact accaaaggat gttggccgtt 540  
50 tgcctctac ttccaggaaac atcaactacc agcacgggac catgcaagac ctgcacgact 600  
52 cctgctcaag gaacctctat gttccctct tggtgtgtaa caaaaccttc ggacggaaat 660  
54 tgcacttgtt ttcccatccc atcatcttgg gctttcgtaa gattcctatg ggagtgggcc 720  
56 tcagtcgtt tctcctgggtt cagttacta gtgcatttg ttcagtgggtt cgtagggttt 780  
58 tcccccaactg tttggcttcc agttatatgg atgatgtgtt attgggggcc aagtctgtac 840  
60 aacatcttga atccctttat accgcttata ccaattttct ttgtctttg ggtatacatt 900  
62 taaaaccctaa taaaaccaag cgttggggct actcccttaa cttcatggga tatgttaattg 960  
64 gaagttgggg taccttgcca caggaacata ttgtacaaaa aatcaaa 1007  
67 <210> SEQ ID NO: 2  
68 <211> LENGTH: 270  
69 <212> TYPE: PRT  
70 <213> ORGANISM: hepatitis B virus  
72 <400> SEQUENCE: 2  
74 Glu Asp Trp Gly Pro Cys Ala Glu Tyr Gly Glu His His Ile Arg Ile

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75 1 5 10 15  
 78 Pro Arg Thr Pro Ala Arg Val Thr Gly Gly Val Phe Leu Val Asp Lys  
 79 20 25 30  
 82 Asn Pro His Asn Thr Lys Glu Ser Arg Leu Val Val Asp Phe Ser Gln  
 83 35 40 45  
 86 Phe Ser Arg Gly Ser Thr His Val Ser Trp Pro Lys Phe Ala Val Pro  
 87 50 55 60  
 90 Asn Leu Gln Ser Leu Thr Asn Leu Leu Ser Ser Asn Leu Ser Trp Leu  
 91 65 70 75 80  
 94 Ser Leu Asp Val Ser Ala Ala Phe Tyr His Leu Pro Leu His Pro Ala  
 95 85 90 95  
 98 Ala Met Pro His Leu Leu Val Gly Ser Ser Gly Leu Pro Arg Tyr Val  
 99 100 105 110  
 102 Ala Arg Leu Ser Ser Thr Ser Arg Asn Ile Asn Tyr Gln His Gly Thr  
 103 115 120 125  
 106 Met Gln Asp Leu His Asp Ser Cys Ser Arg Asn Leu Tyr Val Ser Leu  
 107 130 135 140  
 110 Leu Leu Leu Tyr Lys Thr Phe Gly Arg Lys Leu His Leu Tyr Ser His  
 111 145 150 155 160  
 114 Pro Ile Ile Leu Gly Phe Arg Lys Ile Pro Met Gly Val Gly Leu Ser  
 115 165 170 175  
 118 Pro Phe Leu Leu Val Gln Phe Thr Ser Ala Ile Cys Ser Val Val Arg  
 119 180 185 190  
 122 Arg Ala Phe Pro His Cys Leu Ala Phe Ser Tyr Met Asp Asp Val Val  
 123 195 200 205  
 126 Leu Gly Ala Lys Ser Val Gln His Leu Glu Ser Leu Tyr Thr Ala Ile  
 127 210 215 220  
 130 Thr Asn Phe Leu Leu Ser Leu Gly Ile His Leu Asn Pro Asn Lys Thr  
 131 225 230 235 240  
 134 Lys Arg Trp Gly Tyr Ser Leu Asn Phe Met Gly Tyr Val Ile Gly Ser  
 135 245 250 255  
 138 Trp Gly Thr Leu Pro Gln Glu His Ile Val Gln Lys Ile Lys  
 139 260 265 270  
 142 <210> SEQ ID NO: 3  
 143 <211> LENGTH: 226  
 144 <212> TYPE: PRT  
 145 <213> ORGANISM: hepatitis B virus  
 147 <400> SEQUENCE: 3  
 149 Met Glu Ser Thr Thr Ser Gly Phe Leu Gly Pro Leu Leu Val Leu Gln  
 150 1 5 10 15  
 153 Ala Gly Phe Phe Leu Leu Thr Arg Ile Leu Thr Ile Pro Lys Ser Leu  
 154 20 25 30  
 157 Asp Ser Trp Trp Thr Ser Leu Asn Phe Leu Gly Ala Pro Thr Cys  
 158 35 40 45  
 161 Pro Gly Gln Asn Leu Gln Ser Pro Thr Ser Asn His Ser Pro Thr Ser  
 162 50 55 60  
 165 Cys Pro Pro Ile Cys Pro Gly Tyr Arg Trp Met Cys Leu Arg Arg Phe  
 166 65 70 75 80  
 169 Ile Ile Phe Leu Phe Ile Leu Leu Cys Leu Ile Phe Leu Leu Val

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Input Set : A:\19781.seq.txt  
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170	85	90	95													
173	Leu	Leu	Asp	Tyr	Gln	Gly	Met	Leu	Pro	Val	Cys	Pro	Leu	Leu	Pro	Gly
174				100			105							110		
177	Thr	Ser	Thr	Ser	Thr	Gly	Pro	Cys	Lys	Thr	Cys	Thr	Thr	Pro	Ala	
178				115			120						125			
181	Gln	Gly	Thr	Ser	Met	Phe	Pro	Ser	Cys	Cys	Cys	Thr	Lys	Pro	Ser	Asp
182				130			135					140				
185	Gly	Asn	Cys	Thr	Cys	Ile	Pro	Ile	Pro	Ser	Ser	Trp	Ala	Phe	Val	Arg
186	145					150				155				160		
189	Phe	Leu	Trp	Glu	Trp	Ala	Ser	Val	Arg	Phe	Ser	Trp	Phe	Ser	Leu	Leu
190					165			170				175				
193	Val	Pro	Phe	Val	Gln	Trp	Phe	Val	Gly	Leu	Ser	Pro	Thr	Val	Trp	Leu
194				180			185					190				
197	Ser	Val	Ile	Trp	Met	Met	Trp	Tyr	Trp	Gly	Pro	Ser	Leu	Tyr	Asn	Ile
198				195			200				205					
201	Leu	Asn	Pro	Phe	Ile	Pro	Leu	Leu	Pro	Ile	Phe	Phe	Cys	Leu	Trp	Val
202				210			215				220					

205 Tyr Ile

206 225

209 <210> SEQ ID NO: 4

210 <211> LENGTH: 982

211 <212> TYPE: DNA

212 <213> ORGANISM: hepatitis B virus

214 <400> SEQUENCE: 4

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217	ccacccaaact	ctgcaagatc	ccagagtgag	aggcctgtat	ttccctgtcg	gtggctccag	120
219	ttcaggaaca	gtaaaccctg	ttccgacttc	tgtctctcac	acatcgtaa	tcttctcgag	180
221	gattgggttc	cctgcgctga	acatggagaa	catcacatca	ggattcctag	gaccctgct	240
223	cgtgttacag	gcggggtttt	tcttgttgcac	aagaatccctc	acaataccgc	agagtctaga	300
225	ctcgtggtgg	acttctctca	attttcttagg	gggaactacc	gtgtgtcttg	gccaaaattc	360
227	gcagtcccca	acctccaatc	actcaccaac	ctcctgtcct	ccaacttgtc	ctggttatcg	420
229	ctggatgtat	ctgccccgtt	ttatcatctt	cctcttcatc	ctgctgctat	gcctcatctt	480
231	cttgggggtt	cttctggact	atcaaggtat	gttggccgtt	tgtcctctaa	ttccaggatc	540
233	ttcaaccacc	agcacgggac	catgcagaac	ctgcacgact	cctgctcaag	gaaactctat	600
235	gtatccctcc	ttttgtgtat	ccaaaccttc	ggacggaaat	tgcacctgtat	ttcccatccc	660
237	atcatcctgg	gctttcgaa	aattcctatg	ggagtggggcc	tcagcccgat	tctcctggct	720
239	cagttaacta	gtgccatgg	ttcagtggat	cgtagggctt	tccccactg	tttggcttcc	780
241	agttatatgg	atgatgtgtt	attggggggcc	aagtctgtat	cgcattttga	gtcccttttt	840
243	accgctgtta	ccaaatttct	tttgcatttt	ggtatacatt	taaacccctca	caaaaacaaaa	900
245	agatggggtc	actctttaca	tttgcatttt	tatgtcattt	gatgttatgg	gtcatttgcct	960
247	caagatcaca	tcagacagaa	aa				982

250 <210> SEQ ID NO: 5

251 <211> LENGTH: 268

252 <212> TYPE: PRT

253 <213> ORGANISM: hepatitis B virus

255 <400> SEQUENCE: 5

257	Glu	Asp	Trp	Gly	Pro	Cys	Ala	Glu	His	Gly	Glu	His	His	Ile	Arg	Ile
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258	1				5			10				15			
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261	Pro	Arg	Thr	Pro	Ala	Arg	Val	Thr	Gly	Gly	Val	Phe	Leu	Val	Asp	Lys
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262	20	25	30	
265	Asn Pro His Asn Thr Ala Glu Ser Arg Leu Val Val Asp Phe Ser Gln			
266	35	40	45	
269	Phe Ser Arg Gly Asn Tyr Arg Val Ser Trp Pro Lys Phe Ala Val Pro			
270	50	55	60	
273	Asn Leu Gln Ser Leu Thr Asn Leu Leu Ser Ser Asn Leu Ser Trp Leu			
274	65	70	75	80
277	Ser Leu Asp Val Ser Ala Ala Phe Tyr His Leu Pro Leu His Pro Ala			
278	85	90	95	
281	Ala Met Pro His Leu Leu Val Gly Ser Ser Gly Leu Ser Arg Tyr Val			
282	100	105	110	
285	Ala Arg Leu Ser Ser Asn Ser Arg Ile Phe Asn His Gln His Gly Thr			
286	115	120	125	
289	Met Gln Asn Leu His Asp Ser Cys Ser Arg Lys Leu Tyr Val Ser Leu			
290	130	135	140	
293	Leu Leu Leu Tyr Gln Thr Phe Gly Arg Lys Leu His Leu Tyr Ser His			
294	145	150	155	160
297	Pro Ile Ile Leu Gly Phe Arg Lys Ile Pro Met Gly Val Gly Leu Ser			
298	165	170	175	
301	Pro Phe Leu Leu Ala Gln Phe Thr Ser Ala Ile Cys Ser Val Val Arg			
302	180	185	190	
305	Arg Ala Phe Pro His Cys Leu Ala Phe Ser Tyr Met Asp Asp Val Val			
306	195	200	205	
309	Leu Gly Ala Lys Ser Val Ser His Leu Glu Ser Leu Phe Thr Ala Val			
310	210	215	220	
313	Thr Asn Phe Leu Leu Ser Leu Gly Ile His Leu Asn Pro His Lys Thr			
314	225	230	235	240
317	Lys Arg Trp Gly His Ser Leu His Phe Met Gly Tyr Val Ile Gly Cys			
318	245	250	255	
321	Tyr Gly Ser Leu Pro Gln Asp His Ile Arg Gln Lys			
322	260	265		
325	<210> SEQ ID NO: 6			
326	<211> LENGTH: 226			
327	<212> TYPE: PRT			
328	<213> ORGANISM: hepatitis B virus			
330	<400> SEQUENCE: 6			
332	Met Glu Asn Ile Thr Ser Gly Phe Leu Gly Pro Leu Leu Val Leu Gln			
333	1	5	10	15
336	Ala Gly Phe Phe Leu Leu Thr Arg Ile Leu Thr Ile Pro Gln Ser Leu			
337	20	25	30	
340	Asp Ser Trp Trp Thr Ser Leu Asn Phe Leu Gly Gly Thr Thr Val Cys			
341	35	40	45	
344	Leu Gly Gln Asn Ser Gln Ser Pro Thr Ser Asn His Ser Pro Thr Ser			
345	50	55	60	
348	Cys Pro Pro Thr Cys Pro Gly Tyr Arg Trp Met Tyr Leu Arg Arg Phe			
349	65	70	75	80
352	Ile Ile Phe Leu Phe Ile Leu Leu Cys Leu Ile Phe Leu Leu Val			
353	85	90	95	
356	Leu Leu Asp Tyr Gln Gly Met Leu Pro Val Cys Pro Leu Ile Pro Gly			

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357	100	105	110	
360	Ser Ser Thr Thr Ser Thr Gly Pro Cys Arg Thr Cys Thr Thr Pro Ala			
361	115	120	125	
364	Gln Gly Asn Ser Met Tyr Pro Ser Cys Cys Cys Thr Lys Pro Ser Asp			
365	130	135	140	
368	Gly Asn Cys Thr Cys Ile Pro Ile Pro Ser Ser Trp Ala Phe Gly Lys			
369	145	150	155	160
372	Phe Leu Trp Glu Trp Ala Ser Ala Arg Phe Ser Trp Leu Ser Leu Leu			
373	165	170	175	
376	Val Pro Phe Val Gln Trp Phe Val Gly Leu Ser Pro Thr Val Trp Leu			
377	180	185	190	
380	Ser Val Ile Trp Met Met Trp Tyr Trp Gly Pro Ser Leu Tyr Arg Ile			
381	195	200	205	
384	Leu Ser Pro Phe Leu Pro Leu Leu Pro Ile Phe Phe Cys Leu Trp Val			
385	210	215	220	
388	Tyr Ile			
389	225			
393	<210> SEQ ID NO: 7			
394	<211> LENGTH: 1045			
395	<212> TYPE: DNA			
396	<213> ORGANISM: hepatitis B virus			
398	<400> SEQUENCE: 7			
399	cagcagcgcc tcctcctgcc tcctccaatc ggcagtcagg aagacagcct actcccatct	60		
401	ctccacctct aagagacagt catcctcagg ccatgcagt gaactccagc acattccacc	120		
403	aagctctgct agatcccaga gtgaggggcc tatatttcc tgctggggc tccagttccg	180		
405	gaacagtaaa ccctgttccg actactgcct ctcccatatc gtcaatctc tcgaggactg	240		
407	gggaccctgc accgaacatg gagagcacca catcaggatt cctaggaccc ctgctcgct	300		
409	tacaggcggg gttttcttg ttgacaagaa tcctcacaat accacagagt cttagactgt	360		
411	gttggacttc tctcaattt cttaggggaa caccaagtg tcctggccaa aatttgcagt	420		
413	ccccaaacctc caatcaactca ccaacctctt gtcctccaat ttgtcctggc ttcgcgttgc	480		
415	tgtgtctgcg gcgtttatc atttcctct tcattctgtc gctatgcctc atcttcttgt	540		
417	ggggcttctt ggactaccaa ggtatgtgc cgggttgc tctacttcca ggaacatcaa	600		
419	ctaccagcac gggaccatgc aagacctgca cgactcctgc tcaaggaacc tctatgttgc	660		
421	cctcttggc ctgtacaaaa cttcggacg gaaattgcac ttgtattccc atcccatcat	720		
423	cttgggcttt cgcaagattc ctatggaggt gggcctcgtt ccgtttctcc tgggtcagtt	780		
425	tactagtgcc atttggtcag tgggtcgtag ggcttcccc cactgttgg cttttagtta	840		
427	tatggatgat gtggattgg gggcaagtc tgtacaacay cttgaatccc ttttaccgc	900		
429	tgttaccaat tttctttgt cttgggtat acatttaac cctactaaaa ccaaacgttg	960		
431	gggctactcc cttaaactca tgggatatgt aattggaagt tgggtaccc taccacaaga	1020		
433	acatattgtacacaaatca gacaa	1045		
436	<210> SEQ ID NO: 8			
437	<211> LENGTH: 271			
438	<212> TYPE: PRT			
439	<213> ORGANISM: hepatitis B virus			
441	<400> SEQUENCE: 8			
443	Glu Asp Trp Gly Pro Cys Thr Glu His Gly Glu His His Ile Arg Ile			
444	1 5 10 15			
447	Pro Arg Thr Pro Ala Arg Val Thr Gly Gly Val Phe Leu Val Asp Lys			
448	20 25 30			

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/576,906

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Input Set : A:\19781.seq.txt  
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:9; Xaa Pos. 208  
Seq#:12; Xaa Pos. 172  
Seq#:14; Xaa Pos. 288  
Seq#:15; Xaa Pos. 298,300  
Seq#:27; Xaa Pos. 160  
Seq#:30; Xaa Pos. 95  
Seq#:32; Xaa Pos. 312  
Seq#:33; Xaa Pos. 309,327  
Seq#:38; Xaa Pos. 115,147,239  
Seq#:39; Xaa Pos. 134,148,240  
Seq#:41; Xaa Pos. 247  
Seq#:42; Xaa Pos. 142,247

## VERIFICATION SUMMARY

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Input Set : A:\19781.seq.txt

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L:572 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:192  
L:755 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:160  
L:895 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:272  
L:997 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:288  
L:1689 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:144  
L:1844 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:80  
L:2016 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:304  
L:2122 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:304  
M:341 Repeated in SeqNo=33  
L:2405 M:341 W: (46) "n" or "Xaa" used; for SEQ ID#:38 after pos.:112  
M:341 Repeated in SeqNo=38  
L:2508 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39 after pos.:128  
M:341 Repeated in SeqNo=39  
L:2656 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:240  
L:2722 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:128  
M:341 Repeated in SeqNo=42